REMARKS

Claims 1-13 and 25 are pending and stand rejected in the above-referenced Office Action. Claim 7 is cancelled. Claims 26-28 are withdrawn. Claim 1 is amended as supported for example, by paragraph 0018 of the originally-filed application. New claim 29 is added and is supported at least by paragraphs 15 and 18 of the originally-filed specification. Reconsideration of the Application is respectfully requested.

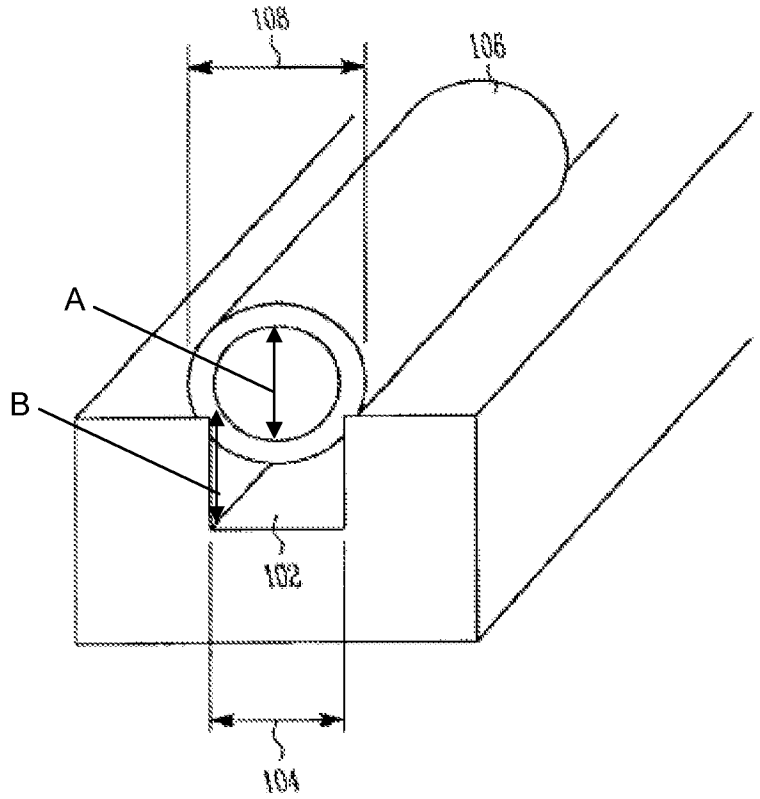
Claims 1-5, 7-13 and 25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Westlund (U.S. 6,643,550). Claim 1, as amended, recites "a component including a surface and a groove formed in the surface; a conductor comprising a plurality of wire strands cabled together, the conductor extending within the lead and positioned within the groove of the component; and a resistance weld formed between the conductor and the component; wherein the groove includes a depth and the conductor positioned within the groove includes a pre-weld diameter, the pre-weld diameter being greater than the depth of the groove".

Westlund discloses a chamfer 207, interpreted as a groove, and a conductor 195 in the groove. Westlund is silent regarding the relative diameter of the conductor and the depth of the groove, however, in FIG. 10D, which shows both chamfer 207 and conductor 195, conductor 195 is clearly shown to have a diameter that is less than the depth of chamfer 207 because the conductor 195 is shown completely inside chamfer 207. Chamfer 207 is described as included in sleeve 115, which has been characterized as a molded insulative hard polymer (col. 4, lines 53-54) so it is unclear how conductor 195 could be resistance welded in chamfer 207. As described with reference to FIG. 10B, the conductor element is positioned inside the partial chamfer 240 where it is coupled to the unitary ring 110 using suitable techniques including resistance welding. As can be seen in FIG. 10D, conductor 195 is completely inside chamfer 240 such that the diameter of conductor 195 is not greater than the depth of chamfer 240.

The Examiner contends that it would be obvious to make a pre-weld diameter of the conductor to be greater than the depth of the groove. However, when a conductor is a solid wire conductor and is larger than the depth of a groove, the point of contact

between a resistance welding electrode and the round conductor forms the point of greatest resistance to the weld current. This point of greatest resistance would create a weld pool on the surface the conductor that is outside the groove. The formation of the weld pool at the weld electrode, outside the groove, prevents formation of an adequate weld pool at the points of contact between the conductor and the groove causing the weld to fail. Westlund describes a pair of conductive elements as a being wound in a coil. However, a single conductive element 195 is placed in the partial chamfer 240. Westlund fails to teach or suggest a conductor comprising a plurality of wire strands cabled together and positioned within a groove. Since a resistance weld of a single conductive element with a pre-weld diameter larger than a depth of a groove would likely fail for the reasons explained above, Applicant respectfully asserts it would not be obvious, based on the teachings of Westlund, to provide a conductor having a pre-weld diameter greater than a depth of the groove. For at least this reason, Applicant respectfully asserts the rejection should be withdrawn.

Claims 1-3, 12, 13, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ley (U.S. 6, 912,423) in view of Bush (U.S. 5,385,578). Ley discloses an insulated filar 106 which is inserted into a groove having a <u>width</u> that is slightly smaller than an outer diameter of the filar. Contrary to the Examiner's assertion, Ley is silent regarding the <u>depth</u> of the groove relative to the outer diameter of the filar. What must be recognized in the Ley reference is that it is the <u>outer insulation</u> of the filar that has a diameter greater than the groove <u>width</u>. The outer insulation becomes stripped away as the filar is forced into the groove such that as the insulation of the filar is removed and electrical connection is made between the filar and the groove. The filar itself has a diameter that is equal to the depth of the groove, as shown in FIG. 10 reproduced below, with arrows A and B added:



Accordingly, Ley fails to teach a conductor having a pre-weld diameter greater than a depth of the groove. If the filar had a diameter greater than the depth of the groove, the filar could not be forced into the groove to provide the electrical connection required by Ley. Bush is not put forth as teaching a pre-weld diameter greater than a depth of the groove and does not remedy this deficiency of Ley. The resistance welding described by Bush appears to be performed against a flat outer body of the sleeve. Bush does not teach a groove and therefore does not teach a groove depth relative to a pre-weld conductor diameter.

Bush describes resistance welding a conductor to an outer body of a sleeve which dispenses the requirement of a support tube or pin which are required in other embodiments disclosed by Bush when a crimping operation is performed instead of the resistance welding. The purported motivation to substitute the resistance weld taught by Bush for the connection method taught by Ley, i.e. to obviate the need for a support tube or pin to minimize the bulk of the connection as stated on page 5 of the Office Action, is not at all applicable in the Ley reference. Ley's method of inserting an

insulated filar into a groove such that the connection is made as the insulation is removed from the filar during the insertion process does not require a support tube or pin. As such, Applicant respectfully asserts there is no motivation to combine references. For at least the foregoing reasons, Applicant asserts the rejection based on Ley and Bush is improper and should be withdrawn.

For the same or similar reasoning as set forth above, new independent claim 29 is novel and inventive over the prior art. Additionally, new claim 29 requires the component "comprising a substantially tubular body having an inner surface and a groove formed in the inner surface", as also required by claim 3, properly depending on claim 1, as previously presented. Westlund is put forth as teaching a groove formed on an inner surface and a conductor positioned within the groove. Contrary to the Examiner's assertion, Westlund only teaches chamfers formed on outer component surfaces and conductors placed inside those chamfers. In FIG. 9B, grooves 255 are shown on an inner surface of ring 110 for receiving a portion of the molded unitary sleeve 115, which is an insulative hard polymer. While Westlund's ring includes an inner surface, and may include grooves on the inner surface, Westlund fails to teach or suggest a conductor positioned within a groove formed in a tubular body inner surface and resistance welded in the inner surface groove. Applicant respectfully asserts new claim 28 is allowable over the cited references.

Applicant asserts that the remarks presented herein are fully responsive to the Office Action and are sufficient to overcome the rejections presented in the Office Action. However, there may be other arguments to be made as to why the pending claims are patentable. Applicant does not concede any such arguments by having not presented them herein. Applicant respectfully asserts that the present claims are in condition for allowance. Withdrawal of the instant rejections and issuance of a Notice of Allowance is respectfully requested.

Should any issues remain outstanding, the Examiner is urged to telephone the undersigned to expedite prosecution. The Commissioner is authorized to charge any deficiencies and credit any overpayments to Deposit Account No. 13-2546.

Respectfully submitted,

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Date

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